Spring 1993

The Planet, 1993, Volume 23, Issue 03

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THE PLANET

Western Washington University's Environmental Quarterly • Vol. ~~XXII~~ 23 No. ~~2~~ 3 • ~~Winter~~ Spr 1993

Editorial

Graduation, humanity, and the environmental movement

The state capital—future battlegrounds for the environment. Greg Myhr

Perched at the pinnacle of my college education, I stand ready to plunge into the seemingly inhospitable depths of the "real world." I've been wondering though, What have I learned?" Having spent a fair amount of time at Evergreen, Huxley, and Fairhaven Colleges, and Western's biology department, I should know something by now, right?

I see that humanity hasn't changed much over time. Despite a string of innovations (including fire, spears, the plow, religion, gun powder, electricity, surgery, television, nuclear bombs, and computers) we're still operating from the same set of basic desires—survival, amusement, and understanding (in about that order).

We also keep improving our special talent for the technological destruction of the Earth. In the midst of the sixth mass extinction, humanity seems to have forgotten its evolution with the rest of the planet's life.

Call me stubborn. I just can't get the idea of providing for human needs without the ecological catastrophe out of my head. Population, energy, resource use, and biological diversity are the tantamount issues here. If the planet were humanity's spouse, we would be kissing the house and kids good-by in divorce court by now.

From Plymouth Rock to the Pacific Northwest Europeans have left their gruesome mark. Manifest Destiny is nearly realized with Armageddon not even in sight (to those who only look at their feet). This was the big goal—where's our prize? Let me see, there's global warming species extinction, landfills, strip-mines . . . .

Securing human survival without the mess requires the same Herculean effort to obtain renewable energy, population control, and wilderness conservation we spent on the space race and the cold war. Whatever works. In any case, Clinton's energy tax is a far cry from the cold shower needed to snap this species out of its marauding stupor. (Sorry Bill.)

Consider amusement. Walking through the woods may not be as exciting as gluing your eyes open with the velocity of a jet-ski or executing the perfect corporate takeover. But it is real entertainment that lasts. Getting what we think we want has yet to prove as sure a path to contentment as wanting what we already have. Keith Murray said it well in 1970, "True affluence is not needing anything."

I would deem most of entertainment today mere distraction. Why might we need diversion? Because the wound of divorce from a meaningful relationship with nature, community, and even ourselves is very painful. Each individual must choose how, or if, to remedy this ailment. Even if a greater sense of connection wouldn't calm the craving for reckless recreation, it caries its own benefits.

As for understanding, it's clear we don't understand our own species or this planet as well as we thought. (If we did we'd have some pretty horrendous planning to explain.) We must survive in order to entertain ourselves and now it seems we must understand in order to do either. In any case, let's hope we're fast learners, and not too proud to deny we've been wrong.

On the lighter side, people prize feeling good. If folks see a problem with a visible course of action to correct it, they'll dig in and get to feel good. Take recycling for example. It's easy, simple, and most people do it. If there is no clear solution in sight, people also seem to feel pretty good about forgetting all about it--and irritated at being reminded. Great; so this means we need to think of solutions.

With the work of filling the media with tales of environmental ruin well underway, there remains an alarming absence of the ground-breaking solutions we so desperately need. We're under the media's wing, I'd say, but not for long. While statistics may stagger, the numbers numb, detaching people from the reality of the crisis.

The environmental community has gotten pretty good at sounding alarms. But right now the fire crews either ignore the blaze or appoint committees upon arrival. Formulating solutions is now more valuable than advertising problems. And as long as our governments drive and support themselves there is little hope for significant change.

Get involved.

After soaking his head, T.R. Morris will graduate from Fairhaven College in June and lead bike tours this summer. Future hopes include aranging another avenue to articulate his alliterations.

THE PLANET

Western Washington University's Environmental Quarterly Vol.XXIII NO. III - Spring 1993

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Front Cover: Chlorine makes the water from this fountain in Bellingham safe—or does it. Photo by Greg Myhr

Local Coyotes subject to rigorous control program

With a clatter of gravel and a streak of gray, my one glimpse of the Sehome Hill coyotes was over. Two of them vanished like wraiths into the underbrush when I came into view. Now when I walk to school I imagine dark forms and keen yellow eyes in every shadow, but have not been blessed with a second glimpse.

Some people are luckier. Mary Brown, whose house borders Sehome Hill, can see coyotes just about any morning. They head up her road on their way to the hill as the secrets of the night recede.

"I look for them," she said. "You know, they just sniff around—they don't seem to bother anyone. I kind of enjoy them."

Apparently not everyone feels the same way. The Bellingham Police Department has received about 30 complaints from the public over the last several years, according to Lieutenant Dascomb "Dac" Jamison, who coordinates the department's coyote control program. Coyotes have been accused of everything from killing cats and following dogs to snooping in people's yards.

"People thought there was a demonic cult around," Jamison said, referring to the loss of cats. "But it wasn't a cult, it was the coyotes."

Police Chief Donald Pierce, in coordination with the city administration, decided something must be done.

Two years ago, the department hired trapper Fred Goodman of the federal Animal Damage Control agency to set traps on Sehome Hill. When coyote complaints continued after police distributed flyers explaining how to discourage the animals, Goodman set traps on Sehome Hill. Trapping continued for several months between 1991 and 1992. Police officers checked the traps daily; they shot any coyotes they found. Jamison said about five were killed, including some juvenile animals.

Jamison, who often checked the traps, said he doesn't like shooting coyotes.

"I love animals," he said. "Killing animals is absolutely a last resort." But the department still considers trapping an option for coyote control, and recently renewed the contract with Animal Damage Control. If trapping is used in the future, the area in which traps are laid will not be announced, for fear of sabotage.

"We knew when we went into this that some people would condemn us for trapping coyotes," Jamison explained. "Other people want to see every coyote in the world eliminated."

There is no doubt that coyotes inspire contradictory feelings. Some people idealize them; others despise them. Even within one person, attitudes toward coyotes can conflict.

Revered by some Native Americans, the coyote is nevertheless ridiculed in tribal tales. While honored as the originator of human customs, the coyote was also denigrated as the ultimate bad example. The coyote embodies the spirit of the American West but embitters most ranchers.

Though I believe Jamison's empathy for the coyote is genuine, he, and other decision-makers, may also be influenced by conflicting attitudes. Police Department information includes an article from California Magazine written by Michelle Huneven, who portrays the coyote as a scrawny, mangy, "pathetic excuse for a canine."

"A coyote's breath is rumored to be so rank he can stun his prey with it," Huneven asserts. She reviles coyotes as sleazy brutes who "glare" at poodles and "gorge on wooly innocents."

I don't know how much influence such language has had on Bellingham's coyote control policy. But the Police Department's use of this slanted article

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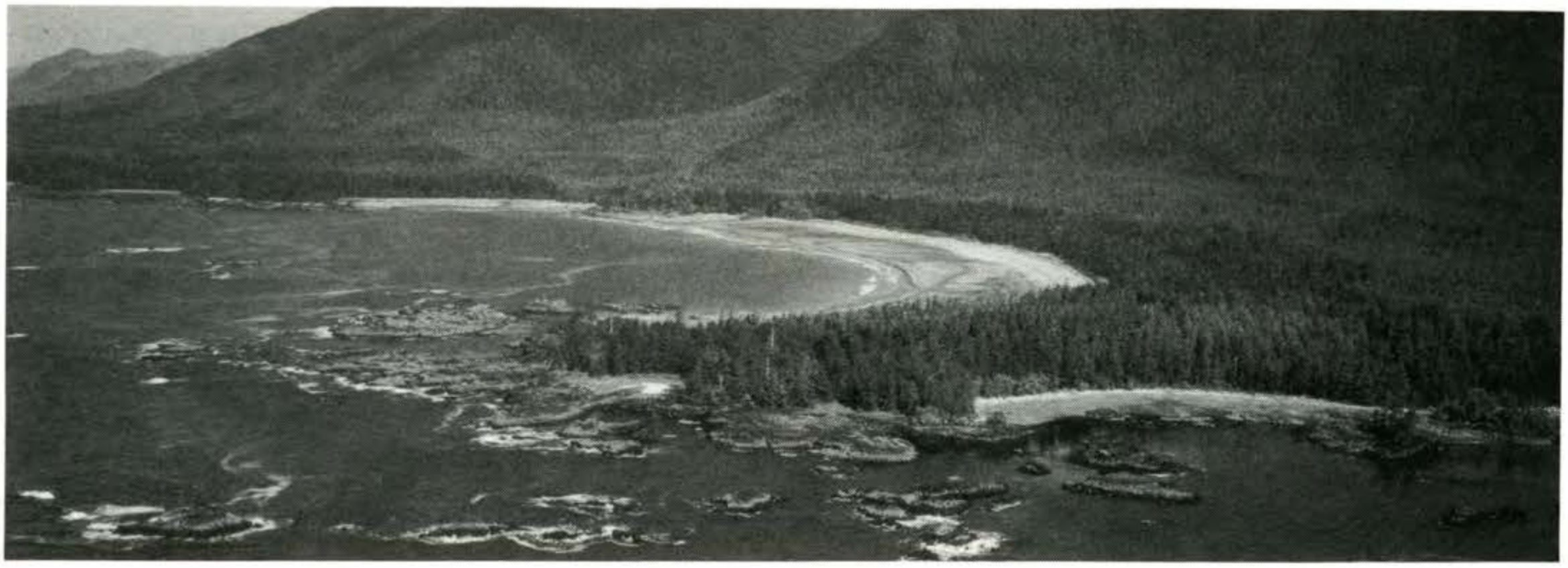


Area view of Clayoquot Sound

Photo Courtesy of Western Canada Wilderness Committee

BC Socialists lose face over Clayoquot sacrifice

Over the past 20 years, British Columbia was ruled by a conservative government, the Social Credit Party, a trickle-down-theory government but infamous for backroom logging deals and corporate kickbacks. They were the bad guys, the economy was bad, the environment was worse, and social services floundered.

In the last election their main competitor, the socialist National Democratic Party (NDP), beat them with a clear majority—including my vote. Even the third party, the Liberals, beat them (for you Yank's this would be similar to Perot getting more votes than Bush in the last election). The NDP's platform was one for balancing logging and conservation, supporting social services with tax money, advocating growth without debt. Hallelujah.

Then came the Clayoquot decision.

On April 13, BC Premier Mike Harcourt "ended" 10 years of controversy over Clayoquot Sound, an area on the west coast of Vancouver Island, when he announced that 33 percent will be protected, 45 percent will be allocated for resource use (a nice way of saying clearcutting), and 17 percent will be put under "special management"—which allows some logging but "protects wildlife, recreation, and scenic landscape values." It looks to this observer that Mikey is trying too hard to please everyone—can logging indeed "protect" wildlife?

Harcourt boldly announced this action creates "one of the largest areas of protected old-growth on the West Coast of North America," but didn't say how much old-growth they will log. Adrianne Carr of the Western Canada Wilderness Committee pointed out: "more than 80 percent of Clayoquot's ancient forests will be cut, leaving the bog and sub-alpine forests, areas that never would have been logged anyway."

The wilderness committee dubbed the NDP: the "no difference party" noting their similarity to the Social Credit Party's backroom deals. As Carr noted:" This decision proves that the real negotiations about Vancouver Island land use take place in the back rooms," Carr states, "and not in the government's Commission on Resources and Environment (CORE)."

The Harcourt government set up CORE to settle disputes between logging companies and environmental groups on land usage policies all over BC—that is, decisions such as the Clayoquot. Yet Harcourt excluded the decision from the CORE process, exhibiting little confidence in CORE's ability to render a decision amenable to the government.

Stephen Owen, the CORE commissioner, was present for Harcourt's announcement, showing support for the decision. Yet since then Owen has recanted: "I think it would have been better if I had not gone there," referring to the recent revelation of the BC government's 50 million dollar investment in MacMillan Bloedel, BC's largest logging company, just prior to the decision.

Why did the NDP do this? Because the NDP is a socialist party. They believe in government health care, government insurance, and, so it seems, government logging companies. The NDP stated that they were helping the logging company out because it was floundering, maybe thousands of loggers out of work, blah blah . . . A far cry from their election campaign when they stated in effect that Mac Blo was a sinking ship they weren't going to try to patch. Yet their 50 million dollars purchased enough shares to make the BC government Mac Blo's largest single stockholder with a vested interest in patching those holes—using a little pitch from Clayoquot spruce, so it seems.

It has since come out that MacMillan Bloedel was quietly handed 85 percent of Clayoquot Sound's commercial cut. A rather red-faced Owen has asked the government to assign Ted Hughes, a conflict-of-interest commissioner, to investigate the purchase of these shares.

Environmental groups are less than pleased—one might even say downright pissed off. They have pulled out of the

CORE process and are pursuing their own courses of action.

The Friends of Clayoquot, an environmental group based in Tofino, the sound's largest town, say the area is one of only two remaining areas of old-growth forests large enough to maintain biological diversity in BC's temperate rainforests. This seems to refute the claim of Harcourt that the logging will "protect wildlife." The group also warns that they will set up road-blocks to stop loggers.

The Vancouver-based Western Canada Wilderness Committee (WCWC) agrees on the biological diversity issue: "conservation biologists believe 200,000 to 500,000 hectares of intact wilderness is necessary to ensure biological diversity." WCWC, probably BC's leading environmental group (but then there are so many), has already spearheaded a successful campaign to save the Carmanah Valley (a valley just south of Clayoquot) from logging. Now they will be building trails into the sound's ancient forests, as well as sending out 50,000 new Clayoquot Sound opinion poll mailers. WCWC's founder, Paul George, thinks the only way to save Clayoquot is to "go international," that is, drawing world wide attention.

Other environmental groups not involved in CORE are also springing into action.

Paul Watson of Sea Shepherd Society warned: "We will spike trees and we will attack logging equipment and we will defend the natural integrity of Clayoquot Sound." Watson boasts that he developed tree spiking for the "inoculation of a tree against a disease called logging." (Way to go, Paul.)

Greenpeace International also supports the cause, but advocates milder measure—so far. They have begun their campaign by picketing in front of the British Columbia House in London with 11 other environmental groups.

The National Resource Defense Council, based in Washington DC, is urging Canada to abide by its Earth Summit commitments. "Canada put itself forward as a leader at the Earth Summit and was the first industrialized country to (break) the biodiversity treaty (because of the Clayoquot decision)," stated Liz Barratt-Brown, a senior attorney with NRDC's International Program.

In a public opinion poll, Harcourt's NDP government has slipped in popularity to third place, owing largely to the Clayoquot decision and other economic policies. The poll also showed that approximately half of British Columbians think more of Clayoquot should be set aside for parks, while only 7 percent think there should be more logging. It appears it's not just the environmental groups that are pissed off now, but about a million voters who put the NDP in power.

So why is the public so set against using this area as a tree farm? Because many have been there, and, like me, have wandered around under 200 foot tall cedars, spruce, and Douglas fir's, across deep beds of moss, in the heart of a living forest. Others have been to other inlets and sounds around BC and seen clear-cuts right down to the shoreline, and logs and boulders choking the streams. Others merely appreciate the fact that such a wilderness still exists.

But the NDP would argue that they have a "plan". They will selectively log with helicopters where possible, and they won't allow "large-scale clearcutting". Yet one cannot selectively log an old-growth forest and expect it to keep its integrity, any logging allows light down to the forest floor, changing the flora and fauna living there. I cannot believe they won't clearcut when there are recent cuts within the sound large enough to be seen on satellite photos, and there is no set definition in the plan as to what a "large" clearcut is. Columnist Bob Hunter captured my sentiment perfectly when he called it "Barbarian klutzes at the gate of the Clayoquot temple."

It looks to me like some mad capitalist version of Mikeylocks and the three loggers: Mac Blo mows 40 square miles of trees off Meares Island. Harcourt says: "That one's too big, guys." Mac Blo mows off a mile square in Sydney Inlet. "That one's too small." They cut several five mile square patches. "Hey great guys, those are just right." But this may never hapen, now that their decision to log has been made, he will probably never look.

So the negotiation is over, the decision is made. Now the battle lines are drawn. The only thing that can save Clayoquot's old-growth is for people to fight.

Many groups are mounting a defense and welcome your support, among those; the Western Canada Wilderness Committee, the Sierra Club of Western Canada, The Valhalla Society, and the National Resources Defense Council.

You should contact the Friends of Clayoquot Sound if you are interested in non-violent protest. The main environmental group in the region and does not promote vandalism or tree-spiking, but create blockades on logging roads. Box 489, Tofino, BC, V0R 2Z0. Phone (604) 725-4218.

The Sierra Club of Western Canada is tied to the Sierra Cub in the United States. Their director, Vicky Husband, has a home near Tofino, and has been lobbying locally and internationally. 314 View St., Victoria, BC V8W 1J6, Phone (604) 386-5255.

The Vallhala Society is a small group with a big voice. They have recently published a 36-page newspaper titled "Brazil of the North" with details of BC forest practices. They have written several reports on the Clayoquot. A contact is Colleen McCrory, P.O. Box 224, New Denver, British Columbia, VOG 1S0. Phone (604) 358-2333.

The Natural Resources Defense Council is a Washington D.C based group that has, among other things, changed forestry practices in the Pacific Northwest. One of their senior attorneys, Robert F. Kennedy Jr. toured the Clayoquot in February, and wrote an article on it's preservation for the Vancouver Sun. Their address—1350 New York Ave., N.W., Washington, D.C., 20005. Phone (202) 783-7800.

You can also write to Premier Harcourt and the Minister of Environment, Lands and Parks, Hon. John Cashore. The address is: Legislative Buildings, Victoria, BC V8V 1X4.

Now it is time for you to make a decision. If you decide to help protect the Clayoquot as a natural reserve, you will be joining, among others, authors Farley Mowat, Pierre Burton, and Margaret Atwood; scientist David Suzuki; and the former Canadian federal Minister of the Environment Hon. Charles Caccia. If nobody does anything the area will be logged. Its your choice; its your global heritage. As Bob hunter states: "conservationists make good ancestors."

— *Derek Martin*

Do you dare to drink?

A report on Bellingham's drinking water quality

Trichloromethane, bromodichloromethane, and dibromochloromethane. Sounds like they might be bad for you—they are. They are known carcinogens and can be found in Bellingham's drinking water.

I naively considered drinking tap water to be fairly safe—until last quarter, when I began my research paper about chlorination byproducts in drinking water. I learned chlorination creates trihalomethanes (THMs), and that trichloromethane, also known as chloroform, is the most common THM—making up the majority of THMs.

Additionally, surface water sources like Lake Whatcom, produce more THMs when they are chlorinated because of relatively higher levels of organic materials—surface water runoff is a major source of organics. The development around the Lake Whatcom watershed certainly seemed to be an important factor in the equation, and I questioned whether increased development was causing more of these byproducts. (See the Lake Whatcom Watershed box.)

After its first use in the Chicago stockyards in 1908, chlorination became the major drinking water disinfectant throughout the United States. Chlorination is a process of adding concentrated chlorine solution to water to eliminate water-borne disease—saving millions of lives each year. It remains the most common disinfection method because of cheapness and convenience. Today, more than 75 percent of the nation's drinking water is chlorinated; the rest is untreated well water or disinfected by other means.

Unfortunately, as is often the case with long held traditions, chlorination of drinking water has not been questioned all these years. Even today, little is known about the health effects of chlorination byproducts, but researchers are beginning to question the risks. What we don't know won't hurt us, right?

Bellingham's drinking water supply comes from Lake Whatcom's second basin in the Geneva area. Water is piped to the treatment plant in Whatcom Falls Park where it is cleaned, disinfected with chlorine, and distributed. (See the Drinking Water Pathway box.)

Chlorine containers await decanting into Bellingham's drinking water at the Whatcom Falls Water Treatment Plant. Greg Myhr

So far, the water coming from Lake Whatcom has been fairly clean, with turbidity levels (a measure of suspended particulates) of 0.3 coming into the plant—water with turbidity above 1.0 cannot legally leave the plant. Turbidity measurements are used to indicate the amount of organic and inorganic materials in the water, and the amount of added chlorine increases with higher turbidity levels.

The State Department of Health regulations recommend a minimum residual of chlorine after treatment of 200 ppb (parts chlorine per billion parts water) throughout the entire distribution system. The maximum level is 1000 ppb by the time the water reaches the first customer. Typically 1320 ppb chlorine is added to the water at the treatment plant. (Take a good whiff the next time you get a drink from the tap.)

Residual chlorine in the water provides protection against microorganism regrowth while the water moves throughout the distribution system. "Residuals are usually 600 ppb leaving the treatment plant, and at the end of the system the residuals go down to trace levels," said Bill McCourt, plant superintendent of Public Works.

So far, the chlorine levels in the drinking water have been high enough to prevent bacterial growth. The entire span of the distribution system is monitored daily at 65 representa-

(Continued on page 9)

Students speak out on
Opinions from within and without the

There is no doubt in anyone's mind that the chain saw has taken a massive toll on the forests of Western Washington. In 1988, The Wilderness Society conducted a survey finding only 10 percent of the old-growth forest that once blanketed western Washington and Oregon still standing.

From high elevation stands of subalpine fir and mountain hemlock to the weathered stands of Sitka spruce that hug the coastline: the Pacific northwest is home to the most diverse conifer forest in the world. Stephen Whitney writes in *Naturalist's guide to the Pacific Northwest*: "All together, more than thirty species of conifers inhabit the region, more than in any other area of comparable size in North America."

Since the arrival of Europeans, this diverse forest has been converted into a patchwork of clearcuts and managed stands of Douglas fir. The remaining old-growth forests west of the cascades are found in our national parks (Rainier, Olympic, North Cascades), and in our national forests (Olympic, Gifford Pinchot, Mt. Baker-Snoqualmie). Old-growth forest in national parks is protected from logging. The remaining old-growth in national forests sits in limbo, awaiting finalization on the spotted owl issue.

To argue for the preservation of the remaining old-growth, a critique of modern forestry practices is needed. The preferred method of forest removal is clearcutting. When a section of the forest is slated for logging, a road is bulldozed to the area. Every tree is cut down, and the valuable lumber is loaded on a truck headed for th`e mill, or the shipyard for export to Japan. The remaining debris called "slash" is burned to free up nutrients for replanting. Whitney aptly described this process:

"Diverse old-growth forests are converted to even-aged tree farms, where trees grow like turnips and are harvested nearly as often. These managed, second-growth stands are less diverse than old-growth forests and therefore less stable. Diversity increases ecological stability because disruption of any single element in the system is unlikely to destroy the whole. Slash fires may help to return nutrients to the soil by freeing compounds bound up in woody debris, but they contribute to loss of diversity and resulting instability and may volatilize substantial amounts of nitrogen. In breaking the link between forests that were and forests that will be, the combination of clearcutting, slash burning, and reduction of the 'harvest' rotation period is likely to have disastrous consequences for the productivity, scientific value, and beauty of tomorrow's forests."

Clearcuts leave the soil exposed to rain causing soil erosion. This erosion not only depletes the soil of vital nutrients, but washes silt and debris into surrounding watersheds choking the clear water and destroying salmon runs. The displaced wildlife is forced out of the clearcut and must compete for habitat in the surrounding forest.

In our society, economy takes precedence over ecology, and the managed Douglas fir plantations are no exception. The Douglas fir plantations are managed towards one goal: the production of maximum profits in the shortest amount of time. These industrial forests are cut down in rotations of 30 to 80 years. The problem with this type of management is that millions of acres of land are managed for one species. Herbicides are used to prevent competition from softwoods like red alder and black cottonwood. Until recently, private timber companies like Weyerhauser would hire hunters with dogs to kill the black bears on their property. Robert Michael Pyle writes in his book *Wintergreen*: "The logging giants (who

(see Old growth on page 12)

n forestry issues

movement

Raw logs are exported from this stock in Olympia. Greg Myhr

Nearly all remaining old-growth forests in the Pacific Northwest are on public land. Historically our government has managed these public forests with two opposing goals: harvesting timber and, ironically, saving the forests as a sanctuary of natural habitat.

A former forestry student, I have spent the last five summers working for the public in forest management. I have heard many arguments supporting both sides of the issue.

The most interesting arguments favoring current levels of logging have come from public forest managers and private companies who rely on public land for jobs.

The most common argument—reduced logging puts people out of work, negatively impacting the families and communities that are timber dependent. Although this argument is certainly plausible I would not use it to defend continued logging pubic land.

Why should we sacrifice our public forest as a last resource for the loggers job security? The high volume of timber being extracted from private land during the 70's and 80's was not sustainable. Now, loggers rely on the public forest for their job security. I think they should question the policy of the large timber corporations they are employed by: is our company planning to cut and run, are they practicing sustainable yield, are they replanting effectively, and how much timber really needs to be exported. By asking these questions, loggers might have predicted, and padded, their futures.

Religion is a powerful tool used by the logging community to support their jobs. I have heard them refer to passages in the bible that say the earth's land and resources are "man's domain" and can therefore be exploited to benefit humankind. This extensional attitude should not be permitted as an excuse to cut down the forest. Not only does it interfere with the beliefs and religions of other people, but it also interferes with the well being of organisms that are reliant upon the forest ecosystem.

Contrary to scientific knowledge, I have heard timber workers say that old growth forests are an unhealthy and nonproductive ecosystem. They believe the forest is old and decaying, and that because it converts carbon dioxide to oxygen less efficiently than a younger stand of timber, it is a major contributer to the greenhouse effect.

Old growth forests are a natural ecosystem and there is nothing negative about them, just because they respirate at a lower rate than a younger forest does not mean we should cut them down to slow the greenhouse effect. The positive effects are much more important. The forest is the basis for our watershed, water quality, and species diversity.

The arguments in favor of logging our public land does not come from the logging companies alone; many of your public forest managers believe we should continue the current rate of logging. They believe a reduction in logging on public land will cause a shortage in the trust fund to build schools and universities, not to mention the budget of the agency they are employed by.

I think our managers should take another look at how efficient this method of raising revenue really is. When you take into consideration the cost of road building, slash disposal, replantation, and the loss of the forest, the profit may not have been achieved so efficiently. In this situation the public should have the option of paying taxes instead of selling the forest as an alternative.

State law long ago made it mandatory to maintain these trust funds with profits generated from logging state land. With public support this law could be altered or amended. People can write to the State Forest Practices Board and express their opinions about forest management.

I do not believe in an all out ban on logging, however

(see Logger lifestyle on page12)

Careful where you build

So you want to buy a house on a view lot. You say "Enough" to the smog and congestion of the city — you want a place to live with space around it, west-coast character, a view. You see such houses from your apartment window, barely. You strain your eyes to see through the smog, power-lines, and oppressive blacks and browns of the city, and you can just make out the great multi-leveled cedar castles perched on the sides of green hills, commanding a view of everything. They look like heaven, and you itch to live in one, but you should do more than look before you leap — you should think.

Picture this.

You've got your cedar castle on a hillside; you sit in a silk kimono on your deck admiring your view of the bay. The sun sets, momentarily silhouetting a few boats. You sip your cappuccino and think that this is the milk and honey that you had dreamed about.

Wrong. You feel a shudder through your porch. The windows behind you rattle. A grinding sound gets louder and louder. You jump to your feet and see boulders rolling past your house. You see your front lawn crack and slump down the hill. You feel the deck begin to tilt; you leap inside the house just in time to see a huge boulder — the huge boulder that the real-estate agent said civil engineers had bolted down — crash through your kitchen wall and flatten your La-Z-Boy. You grab and cradle your Macintosh computer as you run out to your Range Rover only to find the hillside has collapsed onto the road. And then you see your neighbor's yard, complete with ornamental shrubs, rush down your little creek in an unwelcome, muddy sort of way, and slap your house off its foundation.

But wait. You haven't even bought your dream house yet and already it's demolished. Although I invented this scene, such mutilation of hillside houses happens all the time. I see it all around my native Whatcom county. My geology teacher, Doug McKeever, took us on field trips to see the carnage. He explained: "The problem about building lots with great views is that anything that may have obstructed the view has already fallen down the hill."

The science of Geology is based on the premise that what has happened, will probably happen again. Rocks have fallen off hillsides, rocks still do. Houses have fallen, . . .

Of course there are some tedious Geology principles at work here. You shouldn't have to learn them, but because a bill to put natural hazard information on the deeds to lands didn't pass — read: the owners of such lands didn't want to lose their land value and thus lobbied against the bill and beat it — you have the pleasure of determining the safety of your lot yourself. But talking about rocks to the un-initiated and un-interested to rock-lore is difficult.

Preferably you should take this paper and go to a pile of good rocks somewhere so you can look at them, feel them, and get their rock vibes to help you understand their true natures. Even better, wander down Chuckanut Drive until you see a cliffy section of road with chunky pavement. The pavement is chunky because the rocks there have a greater affinity for the road below than for the cliff they inhabit, and they frequently fall. You may even be lucky enough to see one drop!

Geologists go mad about cliffs by roads, what they called "roadcuts", and there are even books to this effect like *Roadside Geology of Arizona*, *Roadside Geology of Washington*, etc. Chuckanut ridge is the perfect place to find out about hillside living because it has all the symptoms of being a bad place to live: rocks threatening to fall down the hill, civil engineers trying to keep ahead of them by bolting them down, rocks covering the road making it impassable for weeks, great debris flows where entire hillsides have flowed down and covered roads. In short, I'd suggest wearing a helmet.

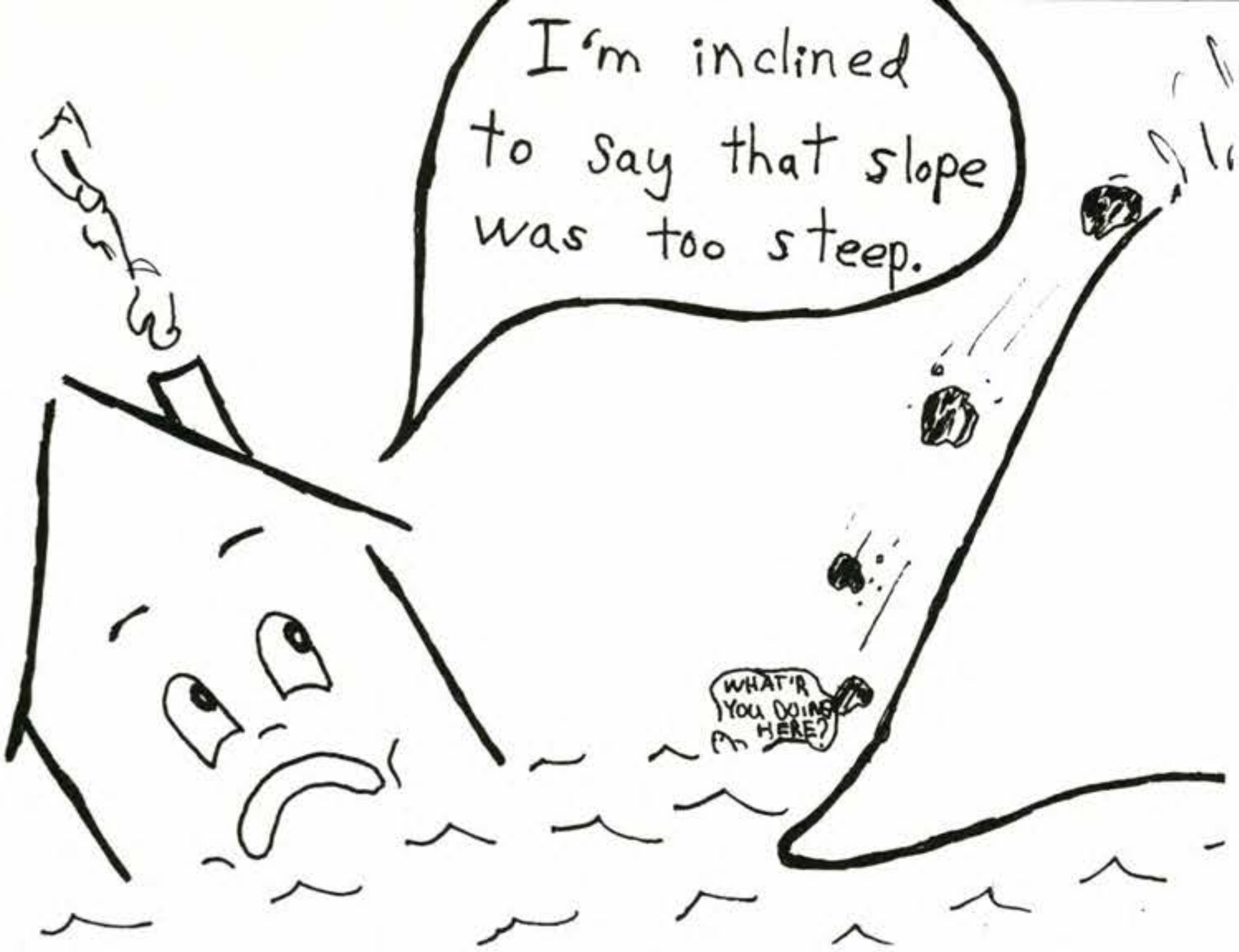
"The problem about building lots with great views is that anything that may have obstructed the view has already fallen down the hill."

When people made the foundations for houses on the hill, they have bulldozed a hole into the side of the hill and used the dirt to make a platform. If you look at one of these things from the side, it looks like a great wedge of dirt that's flat on top, but a cliff on the downhill side. Picture it this way: Imagine that you had a pail full of wet sand and a slide. You take this sand, and in the middle of the slide you make a platform with it that looks like a ski jump. Note the slope on the downhill side looks like a cliff. Now pick up Junior and put him on your sand platform. Let go. What has happened to your pretty platform? Don't strain now, I'll tell you. It's down at the bottom of the slide with Junior.

Here's the scoop. The cliff face of sand was weak. Sand doesn't like to be a cliff, that's why it's usually found in flat places like beaches. Junior put extra weight on the sand, and this weight caused the sand to slide. Now take this newly-found wisdom and apply it to our Chuckanut view lot. Here's this similar ski-jump of sand and dirt. Now lets put a house on it. First we put a concrete foundation on, then a few groves of trees in the form of lumber, then truckloads of plasterboard, then several brand-name appliances, a garage, and a Range Rover. And you thought Junior was heavy!

But of course the wedge of dirt that makes-up the building lot is not on an angled steel plate, it's on angled sandstone. Sandstone isn't as slippery. And you say that sand doesn't stick together as well as sand and dirt, such as is found on Chuckanut. Good points, I say, but I also say that you are still some trivia short of a Geology degree.

Now let's think about groundwater. That's the stuff you land in when you fall down a well. It's everywhere under-



ground, especially in the Pacific Northwest, and especially in the wet season. Now imagine this. Sandstone is like sandpaper, so get a sheet of sandpaper and glue it to your slide. Now run a hose down your slide. Now try to get any kind of sand or dirt to stick to the sandpaper. Now if you were lucky enough to get some to stick, put Junior up there again. Junior and dirt-pile get a one-way ticket to the bottom of the slide. And isn't he muddy? That muddy mess could be your future house!

But of course there is no hose running down Chuckanut ridge, but there is a lot of water that flows down through that soil when it rains. Enough to float a house. And if you have a septic tank and water your garden, this adds even more water and weight to your already sodden soil.

People such as civil engineers recognize the groundwater problem and make an elaborate spaghetti-bowl of drain-pipes to get that water away from your yard. But these pipes need an outlet, an outlet that concentrates all of the ground-water in one place on the hillside that already had plenty. They did just this on Chuckanut Ridge in fact they pointed the water at a forested part of the hillside and figured that the trees would hold the hillside in place. Wrong! During a rainstorm, dirt, trees, shrubs, boulders, and a driveway washed down the hillside in an enormous mess — what Geologists call a "debris torrent". It just missed a house and spread across California street, closing the road for a week. Another debris torrent like this happened at Smith Creek on Lake Whatcom, which slapped a house off its foundation and floated it well out into the lake. The owners didn't even have a yard left because Smith Creek decided that their lot made a fine creek bed. And the residents of Bellingham had a house floating around in their drinking water.

Now, lets say that someone smart decides to bolt their lovely home down to the bedrock. This sounds like a swell idea, because the bedrock has been there for a long time and is a little more solid than dirt. It sounds good in theory, but

Chuckanut's bedrock is a special case. It's made of sandstone; that is layered like a stack of dinner plates, and stuck together about as well. And the stack is angled at the same slope as the hill. These plates are loaded with what geologists call "joints", but are really just big cracks. Now picture that you have a stack of cracked plates, and you put them on their edges and lean them at about a forty-five degree angle. Now you go to the plate in front and you take out a piece from the bottom edge of the plate. The rest of the plate slides down to take the place of the missing piece. Now picture your bedrock slab that you have anchored your house to. When the road was put in up to your house they undercut these slabs in a similar way; taking away a bit of the plate so there was no support underneath. It's the same principle that makes the cliffs on Chuckanut Drive shed their rocks onto passing cars.

Of course, you can get a geologist to survey your bedrock to make sure that it is not weakened by cracks, but then you still have the biggest danger of them all — earthquakes. They cause mountains to shrug off their unwelcome guests, and houses are high on their unwelcome-scale. And Geologists say the Pacific Northwest is due for a big earthquake. Our local fault has been building up pressure, and waiting. Geologists are sure about the pressure building up because the Olympic Mountains are defying gravity — they're growing. They predict an earthquake that will make the San Francisco ones look small.

"Bah," you say. You don't worry about this geology hoo-haw, you have engineering reports on the foundations, environmental impact statements, and insurance policies. The people that write these things have degrees in that sort of thing, and say that your house will merrily hang on to the hillside for years. You have faith in their science; you believe that man can conquer nature. I say that they're telling you what you want to hear. They get paid for writing reports like that. They have insurance policies for the mistakes they make. How long do you think that they took to decide about your lot's safety? Less time than it would take you to fall asleep in your view-bedroom, I'm sure. Don't forget: they don't have to live in your house.

But go ahead if you want. Don't listen to me. Get a nice view home with plenty of snob appeal; see if I care. But picture Mother Nature as a horse. She likes the saddle on the top, not on the sides. And she bucks.

Derek Martin is a creative writing major.
When asked to reveal more about himself he responded:
"Haven't I said enough in this issue already?"

Lake Whatcom's Watershed

Is development around Lake Whatcom's watershed affecting the drinking water quality? The answer seems obvious. But the destructive signals are not readily visible at this time.

Sherilyn Wells, chairperson for Friends of Lake Whatcom (FOLW), said the development around the lake may not lead to observable impacts on water quality right now because of the size of the lake. "A large lake takes longer to pollute than a smaller lake, but eventually, it will become polluted," said Wells. Also, clean water from the Nooksack's middle fork flushes out the lake.

Unfortunately, the smaller tributaries are not in such good shape. Urbanized streams are showing elevated levels of metals, bacteria, and sediment due to watershed development. "We must acknowledge that the lake will show some impacts from more development in the watershed," Wells said. Dr. Mayer, professor at Huxley, agreed saying that "ideally there should be no further development in the watershed, and we may need to restrict use of the lake, especially by power boats."

Another problem is that current water quality tests are chemically (not biologically) based, and do not accurately reflect the health of the lake. "When you add biological criteria to the testing, especially for diversity, population, and health of the population, it adds a whole new dimension to determining the water quality," said Wells.

Dr. Mayer and Wells agree that runoff into the lake should be a monitored closely. Dr. Mayer's major concerns are excess nutrients and pesticides flowing into the lake. While the water department tests for pesticides, the type and actual amount is difficult to determine. "Pesticides should be monitored carefully as time goes by," said Dr. Mayer. Wells agreed saying that "we should be worried about polluted urban runoff and trihalomethanes in our drinking water. Especially in Lake Whatcom where the system is vulnerable and open, and accidents are too easy."

"In 1992, there was a massive fish-kill in Lake Whatcom where 10,000 to 20,000 Kokanee salmon died. The liver dissections revealed that a chemical toxin was the cause," said Wells. Even if hazardous contaminant levels in the water system are low, over time there could be a cumulative effect. "We should be cautious rather than cocky when it comes to our water system."

Another concern for the area is the lack of restrictions on hazardous chemical transportation near the intake area. Wells said that there are no contaminant spill methods to provide a quick response.

It's possible that eventually the Growth Management Act will save the watershed area from further development through restrictions on water availability, but concerned citizens need to be actively involved to maintain the quality of the lake's water.

Water, continued from page 4

tive locations for biological contamination. Unfortunately, while we are protecting our water for bacterial and viral growth we are adding a host of other problems by creating THMs.

Trihalomethanes are created when chlorine reacts with organic materials in the water. "The THM formation is a function of time, and chlorine continues to form compounds as water moves through the system," said McCourt. "THM levels can vary throughout the system, and can double as the water moves from the treatment plant to the far end of the system." This means that the further away you are from the source, the more carcinogens you are exposed to.

Julie Hirsch, technical supervisor of water quality at Public Works said the last quarterly test for total THMs measured at the clear well (the treatment plant's storage reservoir) was 14.4 ppb, and chloroform was 13.3 ppb. At the far end of the system, in the Marietta reservoir, the total THM level measured 34.2 ppb, and chloroform was 34.1 ppb. These levels can go even higher during the summer.

In 1974, the Environmental Protection Agency found chloroform in almost every chlorinated water supply, and because chloroform was known to be a carcinogen, regulations were put into place. Today, the State Health Department's water regulations require that the maximum contaminant level for total THMs must be less than 100 ppb by the time the water reaches the end of the distribution system. These regulations may not be strict enough to reduce the risk to our health—to me, a carcinogen is a carcinogen.

People consuming chlorinated drinking water may have a 21 percent increase in risk of bladder cancer, and a 38 percent increase in rectal cancer.

There is a general disagreement about whether THMs pose a health hazard to humans. Sherilyn Wells, chairperson for Friends of Lake Whatcom (FOLW), said that we should be concerned about THMs, and disinfection byproducts need to be addressed further. McCourt agreed and added that there are a host of other byproducts besides THMs that may also be dangerous to our health. Huxley Professor Dr. Mayer doesn't see chlorination of Bellingham's drinking water as a health hazard at this time. Dr. Yu, also a Huxley professor, disagreed saying that "the health effects of chlorination is now a major concern among many researchers."

An analysis published in the American Journal of Public Health in July of 1992, found a positive association between chronic low-dose exposure to THMs in chlorinated drinking water in the U.S. and bladder and rectal cancer in humans. More specifically, a 21 percent increase in bladder cancer,

and a 38 percent increase in rectal cancer. Additionally, several of the research studies that I looked at indicated that THMs pose a much greater health hazard than chlorine levels in drinking water.

Historically, the benefits of chlorination have outweighed the costs of its potential toxicity. Now that cancer is associated with chlorinated drinking water, interest is renewed in safer alternative disinfection methods like chloramine, chlorine dioxide, and ozone. These alternatives produce lower, and therefore safer, quantities of THMs than chlorine. More thorough filtration of the organic precursors can also reduce THMs. For example, Skagit PUD's THM levels were at 200 to 300 ppb until they added a filtration system to remove THM precursors—now they are less than 10 ppb.

Dr. Mayer and Dr. Yu agreed that alternative methods can be just as effective as chlorination. "A lot of work is being done in the country to substitute ozone or chloramines for chlorination," said Dr. Mayer. Dr. Yu agreed that ozone can be effective for water disinfection, but it is more expensive.

On a more positive note, Dr. Yu said that "it is possible that chlorine and chlorine compounds may be phased out of use because of their impact on biological systems." I would like to see more studies done to test byproducts from these different methods. Only then can a determination be made about which method poses the lowest risk. Unfortunately, for now, Bellingham Public Works has no plans to change from chlorination to an alternative method.

So, what can you do about chlorine and trihalomethanes in your drinking water? The most immediate and direct solution is to add a carbon filter to your faucet to remove chlorinated organic byproducts. Although care must be taken since carbon filters can harbor bacterial growth when not properly maintained. The State Department of Health also has records of the THM and chlorine levels in the water system. You can get this information yourself to check for the levels of THMs that you are consuming.

We should not assume that it is safe to use chlorination as a disinfection process just because that's what we've done for so many years. We should be concerned since chlorination is now being questioned and may have long-term effects on our health. Awareness of all of the factors involved is important so that you can decide for yourself what risks you want to subject yourself to. Unfortunately, as usual, economics may prevail over safety.

When I move back to Seattle, I'll definitely be calling the Health Department to find out the chlorine and THM levels in my water—maybe I'll have to save up for my own carbon filter.

Deanna Adams graduates in environmental science this summer. She plans to explore the working world—once again—to find that "special niche." In the meantime, summer will bring lots of free time to do more hiking, more sailing, more sleeping, and more just plain more fun!

The Drinking Water Pathway

So far, Lake Whatcom's water quality has been fairly high despite increased development. This can be attributed to a diversion dam on the Middle Fork of the Nooksack River. The dam collects and diverts a portion of high quality water through Bowman Mountain to Mirror Lake—then to Anderson Creek and Lake Whatcom. Water quality is monitored at Mirror Lake and above Lake Whatcom.

Bellingham's drinking water is taken out of Lake Whatcom's second basin in the Geneva area, near the base of Cable Street on the west side of the lake. The water is piped through a 750 foot tunnel to a screen house where fish and large debris are prevented from moving through the system. Some chlorine is added at this point to kill bacteria. 33.5 million gallons of treated water per day is piped directly to industrial users—mainly Georgia-Pacific. The rest of the water intake is piped another 1200 feet to the filtration plant in Whatcom Falls Park for treatment.

The treatment plant adds soda ash to reduce acidity, and polymers and alum to coagulate suspended particles into "floc," which is later removed by filtration and sedimentation. Sometimes powdered activated carbon is added for taste and odor control. Finally, more chlorine goes in.

The liquid chlorine evaporates into a gas in a tank and an injector mixes the gas with water forming a concentrated chlorine solution. This solution is then added to the water for disinfection. The finished drinking water is pumped out at a rate of 11 million gallons per day. (Bellingham's water demand has been reduced by the active water conservation program by the Public Works.)

The annual average chlorine dose rate is 1320 ppb (parts per billion), with residual chlorine levels at 600 ppb in the reservoir. The water travels through 300 miles of lines throughout the Bellingham area. The far end of the system is at the Marietta reservoir near the intersection of Slater and I-5. The water system serves 17,000 locations with an average of four people per location—totalling 68,000 people.

New EPA guidelines require a minimum contact time for chlorine with water to control Giardia. The existing one million gallon clear well does not hold enough water (based on peak flow) to meet the minimum contact time for the first customer. To mitigate the problem, a new 16 million gallon reservoir is being planned to meet the peak demand until 2015.

Public Works distributes the treated water to customers throughout the Bellingham area and also sells water to other water districts and the Lummi Nation. Public Works only adds chlorine at the treatment plant, while some of the other utilities rechlorinate the water before distribution.

Coyotes, continued from page 1

may help explain why coyotes have been shot in Bellingham—without trial.

Public input and access to information on the trapping policy are extremely limited.

According to Jamison, the trapping program has had no media coverage until now. Though signs are placed in the woods where the traps are laid, they are rarely, if ever, discovered, and there has been no public notification. "Democratization might backfire," Jamison said. "We don't want some guy to go get his gun and start shooting any coyote he sees." Many residents of the Sehome Hill neighborhood, however, express opposition to trapping, and strong aversion to shooting the coyotes.

"I would feel terrible about that," said Leonard Rossa, who often sees coyotes in his yard. "It's nice to see some wildlife. Coyotes have always been around. You start building houses where they were first, they're going to take

One resident saw her tiny cat chase a coyote from the yard, indicating many cats coexist with their coyote neighbors quite well.

what's available—and that's cats. If you've got a pet of any kind, you should be in charge of it. It should not run loose."

"Trapping?" asked Mary Brown. "No, I don't go for that. They were here before we were. You have to learn to live with them—you know, they're like the deer or something."

Not only were many residents opposed to trapping or shooting the coyotes, but many believed they should have a say in the coyotes' fate.

"I think it should be a public decision," said one woman. Another suggested a neighborhood meeting to provide a mechanism for public input.

Clear evidence that the coyote is actually doing the damage is not available. Nor has consensus been sought on whether such crimes as walking in yards or following dogs should be punishable by death.

Most complaints about coyotes have centered around the cat-killing claim. While coyotes apparently do kill some cats, it doesn't follow that every missing cat is a coyote victim. One Sehome Hill resident told me she saw her tiny Siamese chase a coyote from the yard. I see the same cats on the way to school every day, which indicates that many coexist with their coyote neighbors quite well.

I haven't heard anyone suggest we eliminate the biggest cat-killer of all—cars—from the city. And I'm not sure tax dollars for police protection of human health and safety are meant to cover protection of pets as well. The whole problem could be avoided without cost, controversy or cruelty if cats were kept inside.

Potential aggression toward people raises another, more serious, concern. Urban coyotes have bitten people, and a three-year-old California girl was killed by a coyote in 1981.

This tragedy deserves consideration; it is, however, an isolated case out of countless coyote-human encounters. Coyotes usually avoid humans. Their curiosity should not be construed as aggression. I don't believe it is reasonable to target entire populations because a few people say a coyote followed them while they walked their dog.

Jamison said that the Police Department does not intend to eliminate coyotes. "We only want to eliminate animals that have become an aggressive problem," he said. Though police concern for public safety is appreciated, it is hard to see how traps can discriminate between an aggressive coyote and a shy one—or between a coyote and other animals. The traps on Sehome Hill, for instance, caught juvenile animals that were certainly not a threat to people or cats.

The traps themselves are another bone of contention. Leghold traps are prohibited by city ordinance. Jamison pointed out that police go around the law to protect people; but danger to human health and safety has not been demonstrated in the case of Bellingham's coyotes. No reports of human injuries exist.

Part of Animal Damage Control's current contract with the Police Department is for research on a live trap that coyotes will actually enter (they are wary of standard live traps). Jamison and Goodman hope to develop some sort of anesthesia-filled chew toy to reduce the coyote's anxiety before an officer arrives to shoot it, and they may turn to "euthanasia," or toxic injection, as a means of termination.

But even with live-trapping, coyotes would still be killed. Jamison said relocation does not work, for the coyotes either starve in the new area or find their way back home. So coyotes will be killed if trapping resumes.

The efficiency of trapping as a means of reducing coyote-human conflict is seriously in doubt. Numerous studies on persecuted coyote populations indicate coyotes respond to control efforts by producing larger litters and breeding at an earlier age. Coyotes will not be eliminated in Bellingham, and it is clear that trapping cannot target "aggressive" individuals exclusively.

So what can be done? I think the best hope lies in continued public education efforts.

"We have encouraged the coyotes by not being tidy in our habits," Jamison emphasized. The department counsels residents to remove food sources and to keep (and feed) pets indoors. Tightly secured garbage cans and birdseed cleaned up from around feeders will limit rodent populations near homes. People should not feed wildlife such as raccoons and opossums, because coyotes will eat either them or their food.

In addition to following these guidelines, concerned citizens may contact the Police Department or the mayor to express opinions on trapping. They can insist that city officials operate in the open, and that the public has a voice in any coyote control program. Then, perhaps, the Bellingham coyotes can live in peace, filling their niche in the urban ecosystem and filling the night with their eerie cries, reminding us that we are only a small part of the natural world.

Anita Wahler, environmental education student extraordinare and mother of two, will be editing the Planet *starting in the fall of 1993—keep an eye out for her.*

Old growth, continued from page 7

had names more like Weyerhauser and Zellerbach than Bunyan) wanted no such dynamic woodlands in place of the old-growth they first removed, so they initiated practices to discourage undesirable species. Bears were targeted, along with concentrations of deer and elk that might browse on young conifers. Soon the belief that bears could not coexist became widespread, despite their obvious coevolution."

The managed Douglas fir forest is planted with seedlings of the same age and size. As these grow, their canopy blocks all the sunlight to the forest floor, eliminating the chance of other species to grow. In summary, modern forestry is producing a sterile, fast growing, industrial tree farm.

A natural forest ecosystem acts like a giant recycling plant. Large trees are blown over, or simply fall over. This opens up space in the canopy for sunlight to reach the crowns of smaller trees. Decaying logs on the forest floor breakdown into the soil and provide nutrients for growing trees. The natural forest is growing on itself.

This continuous cycle of growth and decay is not evident in the industrial forest. Trees are simply grown and removed from the system. This constant removal of trees is bound to leave the soil depleted and unable to grow trees. Most of Washington's forest land is on its second or third rotation. How many rotations until the soil fails to produce is unknown, but iminent. When the soil is depleted, large applications of fertilizer will be needed to grow trees. This is something Weyerhauser doesn't like to discuss in its cheery television ads full of deer and children.

The last stands of old-growth forest exist as islands of habitat in a sea of clearcuts and industrial forest. Fragmentation of the old-growth forest ecosystem has left the northern spotted owl vulnerable to extinction. Scientists refer to the northern spotted owl as an "indicator species." This simply means the decline in the owls is representative of the decline in health and size of the old-growth ecosystem.

The media and politicians argue that a compromise is needed. They say a balance must be struck between logging interests and environmental concerns. Compromise is impossible, 90 percent of the Ancient forests are gone. In order to balance this issue, 40 percent of our forest lands would have to magically turn into old-growth forest.

The northern spotted owl is a scapegoat. Timber industry workers claim they are losing jobs because of efforts to save the spotted owl. In actuality, these jobs are being lost to over cutting, automation, and raw log exports to Japan.

The mill worker's job has been sacrificed to a high-tech computer, the logger's job replaced by a feller buncher. A feller buncher is a large machine driven by one person in an air-conditioned cab. This grotesque machine reaches out with one arm and cuts a tree down. The other arm swings around picks the tree up and loads it on to a trailer. Automation at its finest. The realization of a Luddite's worst nightmare.

The spotted owl debate brought to you by *Time*, *Newsweek* and *The Seattle Times* often comes across as a choice between saving a few owls or saving jobs. The real issue at hand—should we preserve the remains of the ancient forest ecosystem, or continue to sacrifice our natural heritage for short term economic gain? Humanity stands at a pivotal point in history. Can we continue down the current path, plundering the earth in pursuit of the myth of endless economic growth? That is the easy route. Or we can take the hard route—reevaluating our relationship with the earth and try living as a community, rather than as destroyers.

While driving down the highway I saw a bumper sticker which read: "We're spending our childrens inheritance." That one phrase acurately describes what I see happening to the ancient forests and the rest of the American West.

The last ancient forests are vestiges of the wild North America that existed for millions of years before European arrival. Saving these forests protects a diverse group of plants and animals, and provides hope for the future.

— Craig Coonrad

Logger lifestyle, continued from page 8

great pressure must be applied to the current practices of logging. The concept of forest liquidation and log export has already done great damage to timber dependent communities and must be stopped.It is time we revaluate the importance of preservation and recreation. Our wilderness areas are overcrowded with hikers, and our dependency upon watersheds for water quality and flood control has never been greater.

Having worked in forestry and listened to loggers, I feel a policy of preservation holds more weight. The idea of being in an ancient forest untouched by human civilization not only provides deep spiritual fulfillment, but it may also provide irretrieveable scientific knowledge. To log an ancient forest means to destroy the environmentalists belief, and to preserve the environmentalists belief means to put the loggers livelihood in jeopardy.

Although both consequences seem perilous, the demise of the logger is not so drastic. We live in a society with programs to aid the displaced logger enabling them to live a normal life. Programs don't exist to replace the benefits of our old growth forests if they are lost. There are also alternative methods of logging that would benefit the logger, such as selective cutting, sustainable yield, and haulting log exports to boost employment.

The managers of our public land hold the fate of our remaining old-growth forests in their hands. It is their current practices and policies that must be scrutinized now more than ever. So you decide, should we save the logger lifestyle, or should we incorporate these methods of logging and save our remaining ancient forests that exist on public land. If you have any questions or comments about the way your public land is being managed, you can call the Department of Natural Resources Forest Pracitices Board (1-800-527-3305), or the U.S. Forest Service (206-956-2300).

Gregor Myhr is a Biology major with an Associate in Arts Degree in Forestry from Centralia College. He has spent the last five summersworking in forest management.

Adventures of an open minded shopper

(Or: what not to do in the grocery store)

Leaning over the green push-bar of my shopping cart, with an inquisitive mind-set, I compared the prices and quality of assorted brands of spaghetti sauces. I weighed how much enjoyment I thought I would receive from the product against their prices and nutritional values. After a while, I came to realize that the Ragu--thick and hearty with mushrooms would be best. Although it contained corn syrup, it was fairly inexpensive and "100 percent natural."

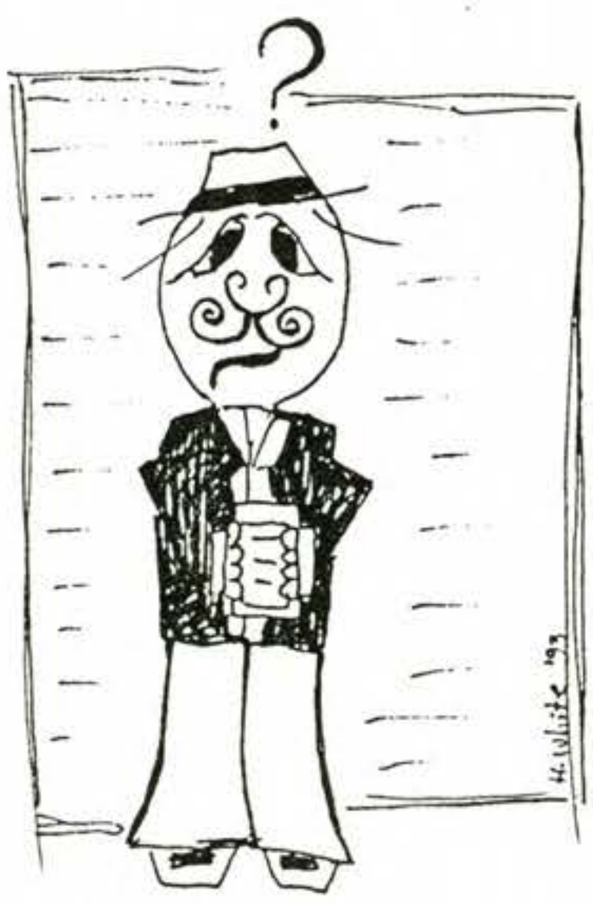
Passing by the canned food isle, a label jumped at me exclaiming, "Better than fresh." I paused with curiosity, wondering how a canned product could be better than fresh.

The can continued with a more reserved knowledgeable voice, "This fine quality fruit cocktail, hand picked in the summer months, has wholesome fruit flavors sealed inside, at their peak of freshness." I looked at the can enviously knowing the flavors still shared the spirit of summer.

The voice continued, "You cannot possibly have a purer, more fruity, fruit cocktail unless you pick fresh fruit and can in the same day, as we have in this finest quality product." "How true!" I thought, as I delicately placed the can in the cart.

Then a horrible thought entered my mind; my shoulders slumped over as I recalled how many times I made use of the produce department, only getting the second freshest product. I picked two more cans, with the intent to return the apples, oranges, bananas and grapes already in the cart.

I continued to the baking goods' section. After reading the label on Guittard's chocolate chips, I felt as if I was a friend of the family. I was touched by the dedication of these French immigrants, making chocolate chips for four generations. And because they used real vanilla, I knew they cared about me.



Investigating the wealth of information available, I discovered a joy I had never known. I was pleased to know that my crackers were baked in clay ovens, my potato chips were made in a steel kettle and my eggs were farm fresh country quality.

After about fifteen minutes in the frozen foods' section I heard a voice say, "Starting with all natural skimmed cream, early American settlers hand churned small amounts of high quality topping. These settlers had ingrained instinct telling them when they obtained the delicate balance between cream and butter, presently known as non-non-dairy whipped topping." Another, more attentive voice announced, "Our fine product is produced in much the same way the settlers did; however, in order to better provide you with a longer lasting, conveniently wrapped product, we use modern equipment and processing techniques." Amazed by the settlers' dedication and hard work, I lowered the tub next to the fresh-canned fruit.

Walking down the cookie isle, I looked carefully for the ones to bring into my home until one color cellophane package delighted me. At first, it was hard to fathom that elves could make cookies in trees; but after examining the wrapper closely, I figured out how it was done. There's a little door underneath an old maple tree. Inside, it's cramped, but the elves are smart—they work in shifts. They spend long hours preparing for the man who comes by to harvest, package and distribute their cookies. A happy tear rolled down my cheek.

After making sure I had everything, I approached the checkout counter. The beep of the electronic cash register enthralled me. As the magnetic strips passed of the red X finish line, I cheered them on. I was content with the products I had chosen. It was a joy to know exactly what I was getting.

—Ace Portnoff